General

Title

Home health care: percentage of home health stays in which patients who had an acute inpatient hospitalization discharge within 5 days before the start of their home health stay were admitted to an acute care hospital during the 30 days following the start of the home health stay.

Source(s)

Centers for Medicare & Medicaid Services (CMS). Measure information form: rehospitalization during the first 30 days of home health. Baltimore (MD): Centers for Medicare & Medicaid Services (CMS); 9 p.

Centers for Medicare & Medicaid Services (CMS). Measure justification form: rehospitalization during the first 30 days of home health. Baltimore (MD): Centers for Medicare & Medicaid Services (CMS); 25 p.

Home Health Quality Measures â€" Outcomes. Baltimore (MD): Centers for Medicare & Medicaid Services (CMS); 2016 Mar. 10 p.

Measure Domain

Primary Measure Domain

Related Health Care Delivery Measures: Use of Services

Secondary Measure Domain

Does not apply to this measure

Brief Abstract

Description

This measure is used to assess the percentage of home health stays in which patients who had an acute inpatient hospitalization within 5 days before the start of their home health stay were admitted to an acute care hospital during the 30 days following the start of the home health stay.

Rationale

Rates of rehospitalization remain substantial with 13.3 percent of home health patients experiencing an unplanned rehospitalization in the first 30 days of care. Currently, home health agencies focus on measures of acute care hospitalization (applied to all home health patients) as a measure of their effectiveness. The *Rehospitalization During the First 30 Days of Home Health* measure will allow home health agencies to further target patients who entered home health after a hospitalization. The Centers for Medicare & Medicaid Services (CMS) has provided support to the Quality Improvement Organizations (QIOs) to address the high rates of rehospitalization. There are other national initiatives to address hospital readmissions, including work by the Institute for Healthcare Improvement, the National Priority Partnership and others. As described in the Evidence Submission Form, there are interventions that may be effective in reducing hospital readmission, including care transition models and telehealth. Thus, continued reporting is beneficial as hospital readmission is a national priority across sites of care and for which there is evidence of how to impact the measure.

Evidence for Rationale

Centers for Medicare & Medicaid Services (CMS). Measure justification form: rehospitalization during the first 30 days of home health. Baltimore (MD): Centers for Medicare & Medicaid Services (CMS); 25 p.

Primary Health Components

Home health; rehospitalization

Denominator Description

Number of home health stays that begin during the 12-month observation period for patients who had an acute inpatient hospitalization discharge within the five days prior to the start of the home health stay (see the related "Denominator Inclusions/Exclusions" field)

Numerator Description

Number of home health stays for patients who have a Medicare claim for an admission to an acute care hospital in the 30 days following the start of the home health stay (see the related "Numerator Inclusions/Exclusions" field)

Evidence Supporting the Measure

Type of Evidence Supporting the Criterion of Quality for the Measure

A systematic review of the clinical research literature (e.g., Cochrane Review)

One or more research studies published in a National Library of Medicine (NLM) indexed, peer-reviewed journal

Additional Information Supporting Need for the Measure

Hospital readmissions are a national priority for Medicare recipients, based on evidence that 20% of all Medicare beneficiaries who were hospitalized had a return hospital stay within 30 days. In 2004, this cost the Medicare program $17.4 billion (Jencks, Williams, & Coleman, 2009). Within home health care, an

analysis of Medicare claims shows that 13.3 percent of home health patients are re-hospitalized within 30 days of the start of home health care. There is limited research on the extent to which these hospital readmissions are avoidable within home health care: one study reporting on patients with heart failure found that more than 40% of the 30 day rehospitalizations may have been avoidable (Madigan et al., 2012). In addition, there is evidence from studies of Medicare patients in general that there are interventions to reduce the need for hospital care amongst a substantial proportion of these Medicare beneficiaries (Jencks, Williams, & Coleman, 2009; Schade et al., 2009). Moreover, there are a number of national initiatives, both governmental (e.g., Quality Improvement Organizations, National Priorities Partnership, and the Centers for Medicare & Medicaid Services [CMS]) and through private foundations (e.g., Institute for Healthcare Improvement), addressing this issue. Thus, there is room for improvement and this is a national priority issue.

Evidence for Additional Information Supporting Need for the Measure

Centers for Medicare & Medicaid Services (CMS). Measure justification form: rehospitalization during the first 30 days of home health. Baltimore (MD): Centers for Medicare & Medicaid Services (CMS); 25 p.

Jencks SF, Williams MV, Coleman EA. Rehospitalizations among patients in the Medicare fee-for-service program. N Engl J Med. 2009 Apr 2;360(14):1418-28. PubMed

Madigan EA, Gordon NH, Fortinsky RH, Koroukian SM, Pina I, Riggs JS. Rehospitalization in a national population of home health care patients with heart failure. Health Res Educ Trust. 2012 Dec;47(6):2316-38. PubMed

Schade CP, Esslinger E, Anderson D, Sun Y, Knowles B. Impact of a national campaign on hospital readmissions in home care patients. Int J Qual Health Care. 2009 Jun;21(3):176-82. PubMed

Extent of Measure Testing

Reliability Testing

Method of Reliability Testing

As a measure of internal consistency, the measure developer conducted a split-half reliability test using 100 percent of each home health agency's patients. Stays for each home health agency were randomly divided into two 50 percent samples, and simulations were run on each 50 percent sample to group the agency into either the "better than expected", "same as expected", or "worse than expected" category. Finally, the results between the two samples for each home health agency were compared to assess how consistently the home health agency was grouped into either the "better than expected", "same as expected", or "worse than expected" category. The measure developer restricted this analysis to home health agencies with at least 40 valid stays, so that each 50 percent sample had at least 20 stays (which is the minimum number of stays required to protect patient confidentiality in public reporting).

Statistical Results from Reliability Testing

For the split-half test, using each home health agency's 50 percent samples to produce two simulations and groupings, the majority of the home health agencies were grouped into the same performance category. Refer to the figure in the original measure documentation, which depicts the results of the split-half test; as represented by the numbers and percentages along the diagonal (i.e., upper-left to bottom-right), 3,953 (80 percent) were grouped into the same performance category as a result of the split-half test. Four-hundred and thirty-eight (9 percent) agencies shifted between the "better than expected" and "same as expected" categories, and 554 (11 percent) agencies shifted between the "worse than expected" and "same as expected" categories. Only 8 agencies shifted between the "better than

expected" and "worse than expected" categories.

Validity Testing

Method of Validity Testing

Critical Data Elements – Method. Review of 2010 Medicare Comprehensive Error Rate Testing (CERT) Report.

As the Centers for Medicare and Medicaid Services (CMS) audits a sample of claims for acute inpatient hospitalizations as part of annual payment error calculations, additional validity testing of measure elements has not been conducted. The annual payment error calculation for 2010 involved a sample of Medicare claims that were then compared to medical records and included 2,454 claims for acute inpatient hospitalizations.

Empirical Validity Testing – Method. The measure developer assessed the convergent validity of the measure, which refers to the extent to which measures that are designed to assess the same construct are related to each other. To evaluate the convergent validity of the measure, the measure developer compared the mean performance rates of home health agencies in the "better than expected" category on four measures of home health quality derived from Outcome and Assessment Information Set (OASIS) assessments, compared to the performance of agencies who were not identified as "better than expected" (i.e., home health agencies in the "same as expected" plus "worse than expected" categories).

Statistical Results from Validity Testing

Critical Data Elements – Results. Of the sampled claims, the hospital had no record of seeing the patient in only one case. It is possible that an extremely small fraction of claims represent care that did not occur, but this problem is clearly not widespread. For acute inpatient hospital claims reviewed, 9.5 percent had some type of payment error. Payment error analysis can also shed light on cases where the patient was hospitalized, but the hospitalization was not medically necessary. Payment errors include insufficient documentation, meaning the reviewers can't determine if the treatment (including hospital admission) was medically necessary, and medical necessity errors. In some cases, the reviewers determined that the patient's medical condition did not require admission to an acute inpatient hospital.

Empirical Validity Testing – Results. Refer to the table in the original measure documentation, which compares the mean performance rates between home health agencies in the "better than expected" category and other home health agencies (i.e., home health agencies in the "same as expected" plus "worse than expected" categories) on four measures of home health quality derived from OASIS assessments.

Refer to the original measure documentation for additional measure testing information.

Evidence for Extent of Measure Testing

Centers for Medicare & Medicaid Services (CMS). Measure justification form: rehospitalization during the first 30 days of home health. Baltimore (MD): Centers for Medicare & Medicaid Services (CMS); 25 p.

State of Use of the Measure

State of Use

Current routine use

Current Use

not defined yet

Application of the Measure in its Current Use

Measurement Setting

Home Care

Professionals Involved in Delivery of Health Services

not defined yet

Least Aggregated Level of Services Delivery Addressed

Single Health Care Delivery or Public Health Organizations

Statement of Acceptable Minimum Sample Size

Does not apply to this measure

Target Population Age

Unspecified

Target Population Gender

Either male or female

National Strategy for Quality Improvement in Health Care

National Quality Strategy Priority

Institute of Medicine (IOM) National Health Care Quality Report Categories

IOM Care Need

Not within an IOM Care Need

IOM Domain

Not within an IOM Domain

Data Collection for the Measure

Case Finding Period

12-month observation period

Denominator Sampling Frame

Enrollees or beneficiaries

Denominator (Index) Event or Characteristic

Encounter

Institutionalization

Denominator Time Window

not defined yet

Denominator Inclusions/Exclusions

Inclusions
Number of home health stays that begin during the 12-month observation period for patients who had an acute inpatient hospitalization discharge within the five days prior to the start of the home health stay. A home health stay is a sequence of home health payment episodes separated from other home health payment episodes by at least 60 days.

Exclusions

- Home health stays that begin with a Low Utilization Payment Adjustment (LUPA) claim
- Home health stays for patients who aren't continuously enrolled in fee-for-service Medicare for the 6 months before or 30 days after the start of the home health stay or until death
- Home health stays in which the patient receives service from multiple agencies during the first 30 days or receives services in another care setting between leaving the hospital and starting home health
- Home health stays occurring within five days of non-qualifying inpatients hospitalizations, which includes admissions for the treatment of cancer, psychiatric disease, or rehabilitations, and inpatient stays ending in patient discharge against medical advice

Exclusions/Exceptions

not defined yet

Numerator Inclusions/Exclusions

Inclusions
Number of home health stays for patients who have a Medicare claim for an admission to an acute care

hospital in the 30 days following the start of the home health stay

Exclusions
Inpatient claims for planned hospitalizations are excluded from the rehospitalization measure numerator. Planned hospitalizations are defined using the same criteria as the Hospital-Wide All-Cause Unplanned Readmission Measure as of January 2013.

Numerator Search Strategy

Fixed time period or point in time

Data Source

Administrative clinical data

Type of Health State

Proxy for Outcome

Instruments Used and/or Associated with the Measure

The Outcome and Assessment Information Set (OASIS) for Home Care

Computation of the Measure

Measure Specifies Disaggregation

Does not apply to this measure

Scoring

Rate/Proportion

Interpretation of Score

Does not apply to this measure (i.e., there is no pre-defined preference for the measure score)

Allowance for Patient or Population Factors

not defined yet

Description of Allowance for Patient or Population Factors

The measure developer used a multinomial logistic model to account for beneficiary factors that may affect rates of hospitalization but are outside of the home health agency's control. Because these measures evaluate two different but related outcomes, one multinomial logistic framework models the three disjoint outcomes: no acute care use (no event), emergency department use without hospital readmission, and rehospitalization. A multinomial logistic model allows for the same risk factors to affect

the possible outcomes in different ways while also constraining predicted probabilities of all three events to sum to one hundred percent. The risk adjustment model uses six months of claims prior to the start of home health care to obtain information about the beneficiary. The measure developer identified a set of 404 covariates that consisted of statistically significant predictors of acute care rehospitalization or emergency use without hospital readmission. The Centers for Medicare and Medicaid Services (CMS) published the risk adjustment model specifications on the Home Health Quality Initiative page in December 2013. The five beneficiary-level risk factors included in the multinomial logistic regression model are as follows:

- Prior care setting
- Age and sex interactions
- Health status
- Medicare enrollment status
- Additional interaction terms

A description of the development of the CMS Home Health Care (CMS-HCC) model can be found on the CMS Web site .

Standard of Comparison

not defined yet

Identifying Information

Original Title

Rehospitalization during the first 30 days of home health.

Measure Collection Name

Outcome and Assessment Information Set (OASIS)

Measure Set Name

Outcome-Based Quality Improvement (OBQI) Measures

Submitter

Centers for Medicare & Medicaid Services - Federal Government Agency [U.S.]

Developer

Acumen LLC, under contract to Centers for Medicare and Medicaid Services - Nonprofit Research Organization

Centers for Medicare & Medicaid Services - Federal Government Agency [U.S.]

Funding Source(s)

Centers for Medicare & Medicaid Services

Composition of the Group that Developed the Measure

Workgroup/Expert Panel Involved in Measure Development
The Technical Expert Panel (TEP) reviewed the measure specifications and public comments received on the Rehospitalization During the First 30 Days of Home Health measure, and provided recommendations on measure development. The TEP included the following members:

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Financial Disclosures/Other Potential Conflicts of Interest

Unspecified

Endorser

National Quality Forum - None

NQF Number

not defined yet

Date of Endorsement

2015 Nov 3

Measure Initiative(s)

Home Health Compare

Adaptation

This measure was not adapted from another source.

Date of Most Current Version in NQMC

2016 Mar

Measure Maintenance

Annually

Date of Next Anticipated Revision

Unspecified

Measure Status

Please note: This measure has been updated. The National Quality Measures Clearinghouse is working to update this summary.

Measure Availability

Source available from the Centers for Medicare & Medicaid Services (CMS) Web site .

For more information, contact CMS at 7500 Security Boulevard, Baltimore, MD 21244; Web site: www.cms.gov .

Companion Documents

The following is available:

> Home health claims-based utilization measures: risk adjustment methodology. Burlingame (CA): Acumen, LLC; 2012 Aug. 20 p. This document is available from the Centers for Medicare & Medicaid (CMS) Web site .

NQMC Status

This NQMC summary was completed by ECRI Institute on November 19, 2015. The information was verified by the measure developer on January 4, 2016. The information was reaffirmed by the measure developer on April 7, 2016.

Copyright Statement

Production

Source(s)

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